CLAIMS

1. An oligopeptide represented by Formula (I) shown below:

A_1-Leu-Asp-Gln-A_2-$(X)_n$ (I)

where A_1 represents a hydrophobic amino acid residue having a side chain with a cyclic group; A_2 represents a hydrophobic amino acid residue having an aliphatic hydrocarbon group or an aromatic hydrocarbon group; n is zero or one; and X represents an amino acid residue.

2. A linearly-linked peptide formed by linking two or more oligopeptides represented by Formula (I) as a repeating unit via a spacer, if necessary.

3. An oligopeptide complex formed by using a linker to the C-terminal of the oligopeptide according to Claim 1.

4. An oligopeptide according to Claim 1, wherein A_1 is represented by Formula (II) shown below:

$$R^1$$
$$|$$
$$CH_2$$
$$|$$
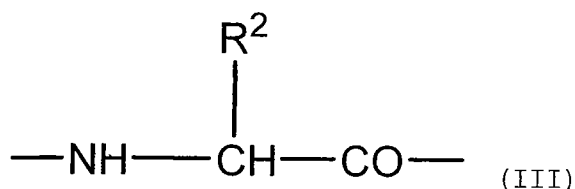$$Z\text{---}HN\text{---}CH\text{---}CO\text{---}$$ (II)
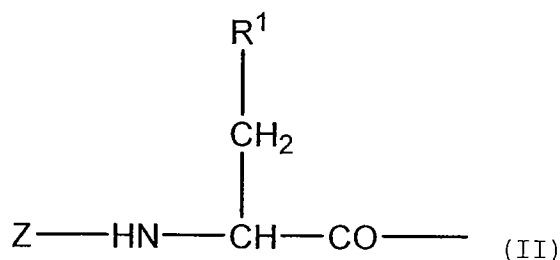
where R^1 represents a cyclic group; and Z represents a hydrogen atom, an alkyl group or an acyl group.

5. An oligopeptide according to Claim 1, wherein A_1 is phenylalanine, 1-naphthylalanine, or cyclohexylalanine.

6. An oligopeptide according to Claim 1, wherein A_2 is

represented by Formula (III) shown below:

$$-NH-\underset{\underset{R^2}{|}}{CH}-CO- \qquad \text{(III)}$$

5   where R^2 is an alkyl or aryl group.

7. An oligopeptide according to Claim 1, wherein A_2 is valine, norvaline, leucine, or phenylglycine.

10   8. An oligopeptide according to Claim 1, comprising Phe-Leu-Asp-Gln-Ile.

9. An oligopeptide according to Claim 1, comprising Phe-Leu-Asp-Gln-Val.

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10. An oligopeptide according to Claim 1, comprising Phe-Leu-Asp-Gln-Phg, where Phg represents a phenylglycine residue.

11. Use of the oligopeptide, linearly-linked peptide
20   and oligopeptide complex according to any one of Claims 1 to 10 for detecting or quantifying dioxin.

12. A peptide immobilizing support formed by linking the oligopeptide, linearly-linked peptide and oligopeptide
25   complex according to any one of Claims 1 to 10 to a support.

13. A peptide immobilizing support according to Claim 12, wherein the support is a bead.

30   14. A method of detecting or quantifying dioxin comprising the steps of:
      (1) bringing the peptide immobilizing support according

to Claim 12 into contact with a labeled dummy and a test sample
which may contain dioxin; and

(2) detecting or quantifying dioxin based on the amount
of the labeled dummy bound to the support which is determined in
5   Step (1).

15.   A method according to Claim 14, wherein the
labeled dummy is NBD-labeled 3,4-dichlorophenol.

10   16.   A method of extracting dioxin comprising the steps
of:

(1) bringing the peptide immobilizing support according
to Claim 12 into contact with a test sample containing dioxin to
bind the dioxin to the support; and
15   (2) separating the dioxin bound to the support obtained
in Step (1) using a solvent.